

ABSTRACT OF THE DISCLOSURE

[0036] An article is provided that includes a substrate and a corrosion-resistant coating provided on the substrate. The substrate generally consists essentially of alumina, and the corrosion-resistant coating is provided so as to directly contact the substrate without the provision of intervening layers between the substrate and the corrosion-resistant coating, such as reaction products provided by high-temperature treatment processes. The corrosion-resistant coating generally consists essentially of a rare earth oxide, and has an adhesion strength not less than about 15 MPa. According to particular embodiments, the article is a ceramic component utilized and implemented in a semiconductor processing apparatus for processing semiconductor wafers.